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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CHAMPAGNE, DONALD

ART UNIT PAPER NUMBER

3622

DATE MAILED: 01/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/850,263

Applicant(s)

JACOBI ET AL.

Examiner

Donald L. Champagne

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 61-81, 83-86 and 97-127 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 61-81, 83-86 and 111-113 is/are allowed.
- 6) ☒ Claim(s) 97-104, 106-110, 114-116, 118-121, 123 and 125-127 is/are rejected.
- 7) ☒ Claim(s) 105, 117, 122 and 124 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11-22-04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 22 November 2004 has been entered.

Claim Rejections - 35 USC § 102 and 35 USC § 103

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 97-104 and 106-110 are rejected under 35 U.S.C. 103(a) as being obvious over Whiteis in view of Tagawa.
5. Whiteis teaches (independent claim 97) a computer implemented method of recommending items to users of a computer (*processor 2*) that provides functionality for selecting items represented in an electronic catalog (*NAMES table 251*, col. 3 lines 27-28), the method comprising: identifying a plurality of items that are currently selected by a target user from

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NAMES table 251 and placed in *INPUT table 201* (col. 4 lines 42-44) to obtain (*purchase*, col. 1 line 15); and identifying and recommending a set of additional items in *RESULTS table 401* (col. 2 line 1 and col. 3 lines 56-57).

6. Whiteis does not teach that the computer (*processor 2*) used to provide functionality for selecting items from an electronic catalog is a server and that the items are to be obtained online. Tagawa teaches file server 112 (col. 10 lines 21-22) to provide functionality for browsing and selecting items from an electronic catalog of items (col. 10 lines 24-29). Because it provides economies of scale to use a central file server for storage of the electronic catalog of items, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to add the teachings of Tagawa to those of Whiteis. Tagawa also teaches that the items are to be purchased online (the *Internet*, col. 9 line 63).
7. Whiteis also teaches at the citations given above claims 106 and 107, where items selected for purchase reads on items selected for delivery to the target user, and claim 110.
8. Whiteis also teaches: claim 104, where *INPUT table 201* reads on an electronic shopping cart; and claims 108 and 109 (col. 1 lines 16-17).
9. Whiteis does not teach (claim 98) generating recommendations in real time. Tagawa teaches an interactive electronic travel service (col. 4 lines 1-14), which reads on generating recommendations in real time.
10. Neither reference teaches (claim 101) a B-tree data structure. Because it is a well-known structure providing efficient lookup, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to store the table as a B-tree data structure.
11. Neither reference teaches (claim 103) filtering out items previously purchased by the target user. Because it can be pointless to recommend items that have already been purchased, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to add filtering out items previously purchased by the target user to the teachings of Whiteis and Tagawa.
12. Neither reference teaches (claims 99 and 100) that the recommendations are based on purchase or viewing histories. However, Whiteis does teach that the recommendations are based on *items previously sampled by the user* (col. col. 2 lines 2-3) and that the population of items comprises the large number available for purchase (col. 1 lines 14-15). Because

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purchasing and viewing are common means for sampling items, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to add to the teachings of Whiteis and Tagawa that the recommendations be based on purchase or viewing histories.

13. Neither reference teaches (claim 102) displaying representations of additional items on a web page. Because Whiteis does teach displaying representations of additional items (col. 4 lines 23-25) and Tagawa teaches the Internet, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to add to the teachings of Whiteis and Tagawa that representations of additional items be displayed on a web page.
14. Claims 114-116, 125 and 126 are rejected under 35 U.S.C. 102(e) as being obvious over Whiteis.
15. Whiteis teaches (independent claim 114) a data mining method, comprising: building and updating *links table 301* (col. 3 lines 43-51), which reads on programmatically analyzing user activity data (col. 3 lines 1-3) associated with a plurality of users of an electronic catalog (*NAMES table 251*, col. 3 lines 27-28), in an off-line processing mode, to generate data values (*Link Weights 304*) representing degrees to which specific catalog items are related to one another, said user activity reflecting user interest in specific catalog items, and said *links table 301* comprising a mapping of said plurality of catalog items to a corresponding set of related catalog items in *RESULTS table 401*; using the data values to select, for each of a plurality of the catalog items, the corresponding set of related catalog items in *RESULTS table 401*, where said results in *table 401* comprise programmatically generated personalized recommendations for each of a plurality of users of the electronic catalog using said mappings (col. 4 line 28-30 and 44-53).
16. Whiteis also teaches at the citations given above claims 115, 116 and 125 (para. 4 above).
17. Whiteis also teaches claim 126 (col. 1 lines 16-17).
18. Claims 118-121, 123 and 127 are rejected under 35 U.S.C. 103(a) as being obvious over Whiteis.
19. Whiteis does not teach (claims 119-121 and 123) that the recommendations are based on purchase or viewing activities or histories. However, Whiteis does teach that the recommendations are based on *items previously sampled by the user* (col. 2 lines 2-3) and that the population of items comprises the large number available for purchase (col. 1

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lines 14-15). Because purchasing and viewing are common means for sampling items, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to add to the teachings of Whiteis that the recommendations be based on purchase or viewing activities or histories.

20. Whiteis does not teach (claims 118) how many users purchased both items of a pair.

However, Whiteis does teach pairs that are indicated to be *the user's top favorites* (col. 3 lines 47-51), and does teach that the recommendations are based on *items sampled by the user* (col. 2 lines 2-3), and that the population of items comprises the large number available for *purchase* (col. 1 lines 14-15). Because purchasing is a common means for sampling items, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to add how many users purchased pairs of items to the teachings of Whiteis.

21. Whiteis does not teach (claims 127) that the data values are generated for purposes other than to obtain recommendations. Because Whiteis teaches predicting the reaction of a person to items not sampled by that person (col. 1 lines 64-67), it would have been obvious to one of ordinary skill in the art, at the time of the invention, to use the invention of Whiteis for the purposes of a guessing game.

Allowable Subject Matter

22. Claims 61-81, 83-86 and 111-113 are allowed.
23. Claims 105 and 124 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
24. Claims 117 and 122 are also objected to as being dependent upon a rejected base claim, and likely would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 117 and 122 exceed the reasonable number of species permitted in a single application without election restriction, so these limitations have not been fully searched.
25. Allowance is further dependent on successful vetting by a "second pair of eyes". Examiner has performed every search deemed reasonable, but does not ask for review of allowable subject matter until applicant indicates willingness to put the application into condition for allowance.

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26. The following is an examiner's statement of reasons for allowance of independent claims 61 and 83: The closest prior art, Whiteis in view of Tagawa, does not teach or suggest maintaining an item selection history identifying items corresponding to and selected by a particular user. Whiteis teaches maintaining an item selection history as *LINKS Table 301* (col. 3 lines 43-45), but the histories are aggregated by item and do not reveal which items correspond to or were selected by a particular user. Stack teaches the maintenance of *customer purchase history database 4* (col. 3 lines 29-40), which reads on an item selection history identifying items corresponding to and selected by a particular user. However, no prior art teaches or suggests adding the teachings of Stack to those of Whiteis in view of Tagawa.
27. Claims 105 and 124 contain allowable matter for a similar reason: The closest prior art, Whiteis in view of Tagawa, does not teach or suggest a user-specific data repository in which item selections are maintained persistently over multiple sessions. A "user specific data repository" is interpreted as a repository where the data is related to a specific user. Whiteis teaches a user-specific data repository (*INPUT table 201*, col. 3 lines 39-40), but does not teach or suggest that the item selections therein are maintained persistently over multiple sessions. Stack teaches a *customer purchase history database 4* (col. 3 lines 29-40), which reads on a user-specific data repository in which item selections are maintained persistently over multiple sessions. However, no prior art teaches or suggests adding the teachings of Stack to those of Whiteis in view of Tagawa.
28. For all four claims 61, 83, 105 and 124, Bieganski (col. 1 lines 32-38) also suggests the limitations not taught or suggested by Whiteis in view of Tagawa. Furthermore, Bieganski (col. 5 lines 29-31) suggests that that invention "may be added to existing recommender systems to improve the value of the recommendations ...". However, neither this nor any other prior art provides the necessary reasonable expectation that such an addition would be successful (MPEP § 2143.02). Bieganski, who can be expected to try to sell the merits of his own invention, merely suggests that it would be obvious to try to add his teachings to those of other recommender systems.¹ Bieganski provides no guidance as to how to implement such an addition. Bieganski does not provide any basis for believing that whatever effort needed to modify other recommender systems would be worth the trouble.

¹ "A. 'Obvious to Try' Motivation Insufficient", *JTPOS*, v. 86, n. 10, October 2004: 838.

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Conclusion

29. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald L Champagne whose telephone number is 571-272-6717. The examiner can normally be reached from 6:30 AM to 5 PM ET, Monday to Thursday. The examiner can also be contacted by e-mail at donald.champagne@uspto.gov, and *informal* fax communications (i.e., communications not to be made of record) may be sent directly to the examiner at 571-273-6717.
30. The examiner's supervisor, Eric Stamber can be reached on 703-305-8469.² The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.
31. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).
32. **ABANDONMENT** – If examiner cannot by telephone verify applicant's intent to continue prosecution, the application is subject to abandonment six months after mailing of the last Office action. The agent, attorney or applicant point of contact is responsible for assuring that the Office has their telephone number. Agents and attorneys may verify their registration information including telephone number at the Office's web site, www.uspto.gov. At the top of the home page, click on Site Index. Then click on Agent & Attorney Roster in the alphabetic list, and search for your registration by your name or number.

DONALD L. CHAMPAGNE
PRIMARY EXAMINER

Donald L. Champagne
Primary Examiner
Art Unit 3622

25 January 2004

² 571-272-6724 after the middle of April, 2005.